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CLAIM 1 (Novelty rejection - Hansson WO 98/3320)

1. A modular personal network comprising:

a processor having a memory module;

said processor having a wireless transceiver;

said processor having a communications interface module to communicate with a remote

processor;

said processor having a configuration module for supporting a plurality of individual network

components (INCs);

a plurality of INCs including:

(i) a mobile telephone,

(ii) an electronic calendar,

(iii) an electronic clock,

(iv) a display, and

(v) an audio output device;

said INCs each having a wireless receiver for communicating with the processor, and

wherein a user program in the processor controls all the INCs.

REMARKS

Hansson shows a system for providing a software update to a cellular telephone.
Hansson shows that an update server (processor) downloads update software to a cellular
telephone through a connection that is made with a wireless cellular network in which the
cellular telephone is operating. In Hansson, it is shown that the software download commences
when the cellular telephone accepts an offer or option for an update from the server. The
download is shown to be through a telephone connection with the cellular telephone. Hansson
does not show all the claimed features. For example, claim 1 specifically recites "a user program
in the processor [that] controls all the INCs." Hansson does not show a user program in the
processor that controls all the network components, let alone does Hansson show a user program
that is in the processor. At best, Hansson states in its abstract that the server (processor 100)
contains the new software and controls the downloading of the software. This does not amount
to showing that a program, the server, or a program in the server controls the cellular telephone.
In addition, claim 1 recites a pluarlity of INCs (e.g., "controls all the INCs"), while Hansson
describes its functionality only with a single cellular telephone.

NEW CLAIM 34

34. (new)A modular personal network comprising:

a processor having a memory module;

said processor having a wireless transceiver;

said processor having a communications interface module to communicate with a remote processor;

said processor having a configuration module for supporting a plurality of individual network components (INCs);

a plurality of <u>dispersed</u> INCs <u>that each have a different primary function within the modular personal network, wherein the primary function of each INC is one of a mobile telephone, an appointment notification unit, an electronic clock, a display, and an audio output device</u> [including:

(vi)a mobile telephone,

(vii)   an electronic calendar,

(viii) an electronic clock,

(ix)a display, and

(x) an audio output device;]

said INCs each having a wireless receiver for communicating with the processor, and wherein a user program in the processor controls all the INCs.

REMARKS

Hansson does not show a network in which there are a plurality of dispersed INCs each having a different primary function, wherein the primary function of each INC is one of a mobile telephone, an appointment notification unit, an electronic clock, a display, and an audio output device.

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CLAIM 5 (Novelty Rejection - Hansson WO 98/38820)

5. (Amended) A method of controlling a modular personal network comprising:

   (a) providing a software application that runs on a personal computer,

   (b) allowing [an extension] a plug-in to the software application that corresponds to a particular individual network component (INC) in the modular personal network,

   (c) allowing a user to use [the extension] the plug-in to download software to a controlling [individual network component] INC to control said particular INC, and

   (d) allowing the user to use [the extension] the plug-in to configure a parameter related to said particular INC.

REMARKS

Hansson shows a system in which an update server (processor) is in communication with a cellular telephone via a cellular telephone network. Hansson shows that new software for the cellular telephone can be downloaded from the server to the cellular telephone. Hansson does not show:

- a plug-in to a software application that is running on a personal computer;

- the plug-in to correspond to a particular INC;

- the plug-in, which is running on a personal computer and corresponds to a particular INC, to be used to download software to a controlling INC to control the particular INC.

An advantage of such a method is that it permits quick and easy reconfiguration when a new INC device type is later added to the system after the system is first installed for operation.

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CLAIM 6 (Novelty Rejection - Bailey U.S. 6,157,824)

6. (Amended) A method of providing security in a modular personal network comprising:

    (a) programming an individual network component (INC) of the modular personal network with a network identifier that is unique to the modular personal network,

    (b) tagging a wireless message sent to the INC with a message network identifier corresponding to the network identifier of the MPN,

    (c) rejecting a received message in the INC if the message network identifier of the received message does not match the programmed network identifier,

    (d) allowing the programmed network identifier to be modified only by an authorized user, and

    (e) not allowing an unauthorized user to retrieve the network identifier from the INC.

REMARKS

Bailey does not show all the features of claim 6. For example, Bailey does not show the rejecting feature of claim 6. Bailey shows a technique by which an appropriate customer is charged for the use of rental equipment, which is rented on an ad hoc basis (e.g., a cellular telephone in a rental car). In Bailey, a user is provided with a key chain that includes transceiver circuitry that contains user profile information. The key chain is interrogated electronically to obtain profile information when the key chain is in proximity to the rental equipment. If the rental equipment recognizes that the key chain is for a new user, the system takes steps for configuring the system for the new user. The system does not reject a transmission from a new user. Bailey specifically states that "[i]f the data transmitted is not consistent with known data from a previous transmission of data, then the data is stored as a new record, transmitted over the airwaves via the communication device being accessed and normal operations then occur." Thus, Bailey does not reject a transmission when inconsistent data is received, rather it reconfigures itself to handle the new data.

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CLAIM 7 (Novelty Rejection - Bhagwat Article)

7. (Amended) [A]The method of <u>claim 6</u> [providing communication between two modular personal networks] <u>further</u> comprising:

    (a) receiving a message in a component of [a first] <u>said</u> modular personal network that was transmitted by a component of a second modular personal network,

    (b) using the received message to determine a network identifier associated with the second modular personal network, and

    (c) sending a message from a component of [the first] <u>said</u> modular personal network to a component of the second modular personal network using the determined network identifier;

    <u>thereby providing secure communication between said modular personal network and the second modular personal network.</u>

REMARKS

Claim 7 has been amended to depend from claim 6, and should be allowable at least for the same reasons as claim 6. In addition, Bhagwat does not provide secure communications between two networks.

CLAIM 8 (Novelty Rejection - Trakus WO 01/00281)

8.   (Amended) A [wrist-mounted] display unit designed to be worn by a user on [a] the radial side of [a] the user's wrist or the dorsal side of the user's hand and to display items selected from the group consisting of text characters, graphics, and video.

REMARKS

Trakus does not show or mention a display unit that is specifically designed for wearing on the radial side of user's wrist. Specifically, Trakus shows a watch, which like all watches, has a display which is designed to be worn on the broad side of the wrist, not the radial side of the wrist. Thus, Trakus does not show a display unit that is designed to be worn on the radial side of the user's wrist.

Also, Trakus does not show or mention a display unit that is specifically designed to be worn on the dorsal side of the user's hand.

An advantage of the dorsal side of the hand, which is also an advantage of the radial side of the wrist, is that in performing physical exercise such as running, the display unit may be viewed without varying from the normal physical movement of the exercise. For example, a runner can typically see the radial side of his wrist during the regular movement of running.

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CLAIM 11 (Novelty Rejection - Trakus)

11.   (Amended) A mobile audio output device comprising:

[(a) a speaker;]

[(b)] (a) a wireless receiver for receiving audio information from another device; [and]

(b) a speaker that outputs the audio information received by the wireless receiver; and

(c) means for mounting the mobile audio device to [an] a single item of clothing selected from the group consisting of a hat, a headband, and a helmet.

REMARKS

All the features of claim 11 are not shown by Trakus. At best, Trakus shows a "speaker 316 [that] is integrated into a wireless headphone worn by the player 216." This, however, does not show the device in Trakus to include means for mounting its speaker and wireless receiver to a single item of clothing, specifically a hat, headband, or helmet.

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CLAIM 12 (Novelty Rejection - Trakus)

12. (Amended) A mobile network comprising an input device and a processing device [comprising] whereby:

(a) the input device comprises a pressure sensor for accepting [user] input commands from a user;

(b) the input device further comprises a radio frequency wireless transmitter for sending the [user] input commands [from the mobile input device to another device] to the processor; [and]

(c) the processor comprises a radio frequency wireless receiver for receiving the input commands from the input device,

[(c)] (d) the mobile network further comprises means for mounting the [mobile] input device to an item of clothing worn by the user; and

(e) the mobile network further comprises means for allowing the user to wear the processor.

REMARKS

Trakus does not show all the features of the claim 12. For example, Trakus does not show an input device that comprises a radio frequency wireless transmitter for sending input commands and a processor that comprises a radio frequency wireless receiver for receiving the input commands.

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CLAIM 9 (Novelty Rejection - Felsentein U.S. 5,781,913)

9. (Amended) A display system comprising:

(a) a plurality of display devices in which a first one of the plurality of display devices differs from a second one of the plurality of display devices, and

(b) a mount on a user's body that can be reused with any one of the plurality of display devices and that allows said any one of the plurality of display devices to be repositioned in a variety of viewing positions on the mount.

REMARKS

In applicant's review of Felsentein, applicant did not find that Felsentein showed "a mount on a user's body that can be reused with any one of a pluarlity of display devices." Moreover, applicant did not find a mention of a mount that allows any one of the plurality of display devices to be repositioned in a variety of viewing positions.

on a 'small mount
that is wearable

CLAIM 10 (Novelty Rejection - Felsentein U.S. 5,781,913)

10.   (Amended) A mobile information system designed to be worn by a user comprising a display unit, a control unit, and an audio output device in which the audio output device is [separate from] not physically connected to the display unit, and wherein the control unit is configured to wirelessly transmit information to be displayed on the display unit and to wirelessly transmit information to be output by the audio output device.

REMARKS

Applicant has reviewed Felsentein and has not found that it shows a control unit that is configured to wirelessly transmit information to be displayed and also configured to wirelessly transmit information to be output by the audio output device. An advantage of the mobile information system of claim 10 is that it gives the user a high level of flexibility in positioning the audio output device and display unit because they are not physically connected and also because the system can wirelessly transmit information to the audio output device and the display unit.

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CLAIM 13 (Novelty Rejection - Felsentein U.S. 5,781,913)

13. (Amended) A mobile information system designed to be worn by a user comprising a display unit, a control unit, and a user input device in which the user input device is [separate from] not physically connected to the display unit, and wherein the user input device is configured to wirelessly transmit commands from the user to the control unit and the control unit is configured to wirelessly transmit information to be displayed to the display unit.

REMARKS

Applicant has reviewed Felsentein and has not found that it shows a user input device that is configured to wirelessly transmit commands to a control unit and the control unit configured to wireless transmit information to be displayed by a display unit. An advantage of the mobile information system of claim 13 is that it gives the user a high level of flexibility in positioning the user input device and the control unit because the positioning of the user input device and control unit are not impeded by a physical connection between the two. Another advantage is that the system can wirelessly transmit information from the user input device to the control unit and wirelessly transmit information to the display unit, which further increases the system flexibility provided to a user.

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CLAIMS 14 (Novelty Rejection - Root U.S. 6,013,007)

14.   (Amended) A method of providing music and audio cues to a user comprising storing music in a storage device configured to be worn or carried by the user, playing music for the user using an audio output device worn by the user, [and] providing the audio cues to the user using the audio output device, and automatically pausing the music while the audio cues are provided.

REMARKS

Root does not show all the features of claim 14, at least, because Root does not that music is automatically paused while audio cues are provided to a user.

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CLAIMS 15 (Novelty Rejection - Root U.S. 6,013,007)

15.   (Amended) A personal data collection system comprising a media [collection] recording device configured to be worn or carried by a user, a personal data collection device configured to be worn or carried by the user, a storage device configured to be worn or carried by the user for storing media collected by the media [collection] recording device and data collected by the personal data collection device, a base station, and a communications device for sending media and data from the storage device to the base station.

REMARKS

Root does not show all the features of claim 15, at least, because Root does not show a personal data collection system that includes a media recording device, a personal data collection device, and a storage device that are each configured to be worn or carried by the user. Applicant has only found a single device within Root (e.g., FIG. 1A) that is configured to be worn or carried by the user. Moreover, applicant has not found Root to show a media recording device.

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CLAIMS 16 (Novelty Rejection - Root U.S. 6,013,007)

16.   (Amended) A method of providing guidance comprising allowing a user to follow a route while <u>wearing or</u> carrying a position monitor, logging the position data measured by the position monitor at intervals while following the route, saving the logged position data, and using the saved data for later guidance <u>of the user while the user is wearing or carrying the position monitor</u>.

REMARKS

Root does not show all of the features of claim 16, at least, because Root does not show that data is saved for later guidance of the user while the user is wearing or carrying the position monitor. An advantage of this method over Root is that an athlete in training can be guided to repeat the same regimen by following the same route that the athlete previously used. This further provides the user with better calibration results for his or her performance.

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CLAIMS 17 (Novelty Rejection - Root U.S. 6,013,007)

17.   (Amended) A method of providing route simulation comprising allowing a user to follow a route while <u>wearing or</u> carrying a position monitor, logging the position data measured by the position monitor at intervals while following the route, saving the logged position data, and using the saved data for controlling a piece of exercise equipment to simulate the route.

REMARKS

In applicant's review of Root, no mention of exercise equipment was found.

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CLAIMS 18 (Novelty Rejection - Root U.S. 6,013,007)

18.   (Amended) A mobile position logging system configured to be worn by a user comprising:

(a) a position monitoring device,

(b) a separate input device for creating annotations,

(c) a memory for storing position or speed data collected from the position monitoring device and input data collected from the input device, and

(d) a communication device for uploading the collected position or speed data and input data from the memory to a personal computer.

REMARKS

Root does not show all the features of claim 18, at least, because Root does not show a mobile position logging system that is configured to be worn by a user and which includes among other things, a separate input device for creating annotations. One advantage of such a system is that it permits the athlete to annotate the athlete's position or speed with notes that will later aid the athlete in interpreting or improving his or her performance.

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CLAIMS 19 (Novelty Rejection - Shea U.S. 6,050,924)

19. (Amended) A method of providing an athletic workout comprising allowing a user to define a set of workout parameters using a workout definition station, downloading the set of workout parameters into a mobile athlete subsystem <u>configured</u> to be worn by an athlete during a workout, <u>wherein the mobile athlete subsystem is configured to</u> [using] use the set of workout parameters during the athlete's workout to control an aspect of the workout, <u>to</u> collect[ing] a workout result during the athlete's workout, and <u>to</u> upload[ing] the workout result into the workout definition station.

REMARKS

Shea does not show all the features of claim 19, at least, because Shea does not show a mobile athlete subsystem that is configured to be worn by an athlete during a workout. At best, Shea shows fixed stations such as an exercise bike or what is shown in FIG. 15A. These are components of a system that is situated in a gym. These different components are not shown to be worn by an athlete. One advantage of the method of claim 19 is that it provides a subsystem that is personal to an athlete. This improves on what is shown in Shea.

112 - parameters

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CLAIMS 20 (Novelty Rejection - Shea U.S. 6,050,924)

20. (Amended) A method of controlling an athletic workout of a single activity type comprising [dividing] allowing a user to divide the workout into a plurality of sections with a plurality of goals, [defining] allowing the user to define a parameter to be controlled during [a] one of the plurality of sections, collecting input during the one section, [providing an output during the section, and] monitoring the parameter during the one section using the collected input, and providing an output based on the monitored parameter and the user definition during the one section.

REMARKS

Shea does not show all the features of claim 20, at least, because Shea does not show a method in which a user can divide a workout of a single activity type into a plurality of section with a plurality of goals.

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CLAIMS 21, 24-29 (Novelty Rejection - Erickson U.S. 5,524,637)

21. (Amended) A method of measuring [the] a stride length of a user comprising measuring speed using a position monitor worn by the user, measuring cadence using an accelerometer worn by the user, and calculating the stride length by dividing the speed by the cadence.

24. (Amended) A method of estimating data samples in a mobile athletic data collection and logging system comprising collecting athletic performance data samples using a device worn or carried by an athlete, recognizing that one or more of the data samples are invalid, [and] estimating values for the invalid data samples, and storing or displaying the estimated values along with the collected data samples not recognized as invalid.

25. (Amended) A method of estimating an athlete's oxygen [consumption] uptake in [an athletic] a system designed to be worn during an athletic effort comprising measuring a duration of [an] the athletic effort, measuring a velocity of the athletic effort, and calculating the oxygen uptake [consumption] based on the duration and the velocity.

26. (Amended) A method of estimating an athlete's maximum oxygen [consumption] uptake in [an athletic] a system designed to be worn during an athletic effort comprising measuring a duration of [an] the athletic effort, measuring a velocity of the athletic effort, and calculating the maximum oxygen [consumption] uptake based on the duration and the velocity.

27. (Amended) A method of estimating an athlete's lactate threshold in [an athletic] a system designed to be worn during an athletic efforts comprising measuring the athlete's heart rate during a series of progressively more difficult athletic efforts and [calculating] determining the heart rate corresponding to the athlete's lactate threshold based on the rate of increase of heart rate [during] between the efforts.

28. (Amended) A method of improving athletic performance comprising measuring a metabolic parameter of a user during an athletic activity, estimating usage or loss of a consumable by the user during the athletic activity based on the measured metabolic parameter, and reminding the user to consume an [additional] amount of the consumable when the estimated usage or loss reaches a defined amount.

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29. (Amended) A training system comprising [an accelerometer] a sensor worn by a user during a training activity, memory to store characteristics of desired movements and outputs from the [accelerometer] sensor, a processor to compare the outputs from the [accelerometer] sensor to the characteristics of desired movements and to use that comparison to determine incorrect form, and an output device to provide feedback to the user on the incorrect form.

REMARKS

Erickson shows an interactive system for measuring physiological exertion in which a user exercises in place while information is gathered with a sensor attached to the user's body. Information is mentioned to include pulse rate or blood pressure. An accelerometer and pressure sensor are used to measure the acceleration or force of limbs during exercise. Exertion of the user is also estimated. Erickson does not show all the features of claims 21 and 24-29, at least, for the following reasons. Erickson does not show that it calculates stride length (claim 21) (most likely there is no stride to measure in Eriksson because the exercise is performed in place). Erikson does not show that it estimates values for invalid data samples (claims 24), because Erikson specifically states that it handles invalid data by using a calibration algorithm that "is robust and not sensitive to noise or irrelevant information." Erikson, column 3, line 25. Erikson does not show that it calculates the oxygen uptake or the maximum oxygen uptake based on the duration and velocity (claims 25 and 26). Erikson does not show determining the heart rate corresponding to the athlete's lactate threshold based on the rate of increase of heart rate between progressively more difficult efforts (claim 27). Erickson does not show that it reminds the user to consume an amount of a consumable when the estimated usage or loss of a consumable reaches a defined amount (claim 28). Erickson does not show that it includes features for correcting form (claim 29).

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CLAIMS 22 and 23 (Novelty Rejection - Johnson WO 87/05229)

22. A method of counting laps while swimming comprising measuring a parameter using an input device worn by the swimmer, measuring a first period of time in which the parameter has a first characteristic, measuring a second period of time in which the parameter has a second characteristic, and counting laps by counting transitions between the first period of time and the second period of time.

23. (Amended) A method of logging a lap swimming workout comprising:

    (a) measuring a parameter using an input device worn by a swimmer,

    (b) evaluating the measured parameter,

    (c) comparing characteristics of the parameter to characteristics of a plurality of swimmer's activities selected from the group consisting of swimming crawl stroke, swimming breaststroke, swimming butterfly, swimming backstroke, kicking, turning, and resting,

    (d) determining the swimmer's activity using the comparison,

    [(d)] (e) estimating time durations for the activities, and

    [(e)] (f) providing the estimated time durations to the swimmer.

REMARKS

Johnson does not show all the features of claims 22 and 23. With respect to claim 22, Johnson on page 3 line 32 to page 4 line 2 discusses a technique for counting individual lengths swum by detecting an impact produced when a swimmer strikes the end of the pool. This, however, does not show what is recited in claim 22, which at least requires counting laps by counting transitions between a first period of time in which a parameter has one characteristic and a second period of time in which the parameter has another characteristic. With respect to claim 23, Johnson does not show a system that determines a swimmer's activity using the comparison that is defined in the claims. Specifically, the system shown in Johnson does not determine whether the swimmer just swam a crawl stroke, a breaststroke, a butterfly, a backstroke, etc This provides a great advantage to an athlete in that the athlete can transition between different swimming activities while data is being collected without requiring the swimmer to stop and indicate or note that he or she is now commencing with a new swimming activity.

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CLAIM 30 (Novelty Rejection - Easton U.S. 5,516,334)

30. (Amended) A method of monitoring a user using a modular personal network (MPN) comprising providing an individual network component (INC) that comprises a mobile monitor to be worn by the user, using the mobile monitor to measure a metabolic value, using the metabolic value to [estimate] detect, predict, or estimate the likelihood of [a] specific medical problem in the user, [and] taking an action to address the medical problem, and allowing an additional INC not related to the monitoring function to be worn or carried by the user and added to the MPN.

REMARKS

Applicant's review of Easton indicates that Easton has nothing to do with detecting, predicting, or estimating the likelihood of a specific medical problem. Moreover, it does not address allowing an additional individual network component that is not related to the monitoring function to be worn or carried by the user and added to the modular personal network.

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CLAIM 31 (Novelty Rejection - Soll U.S. 5,655,018)

31. (Amended) A mobile wildlife recognition system configured to be worn or carried by a user comprising a digital camera to capture a wildlife still image, a first memory to store the captured wildlife still image, a second memory to store a library of wildlife still images, a processor to compare the captured wildlife image in the first memory with wildlife still images in the library in the second memory, and a user output device to display the result of the comparison.

REMARKS

Soll is directed towards dynamic analysis of images of a mobile object. Soll specifically shows a system that includes a video camera, a microscope, a VCR, and a personal computer for implementing dynamic image analysis. Claim 31 is directed towards a system designed to be worn or carried by a user and in addition, includes a digital camera and a library of wildlife still images that are together used for example, to capture a still image of wildlife and compare the image to the library. Advantages of this system involve the mobility of the system with which image comparison may be performed when wildlife is encountered by the user.

CLAIM 32 (Novelty Rejection - Johnson U.S. 5,813,009)

32. (Amended) [An] A portable electronic journal configured to be worn or carried by a user comprising a memory to store journal entries, a user input device selected from the group consisting of a voice input device and a text input device used to create journal entries, a digital camera to create images to store with the journal entries, a clock to tag the journal entries with date and time, a communication device to upload the journal entries to a personal computer, and software to format the journal entries to a common file format.

REMARKS

Johnson is directed towards a records management system for business organization. Johnson addresses the complex document management needs of today's companies. In one embodiment in FIG. 7, Johnson shows a system that includes corporate file servers, an optical jukebox, a local workstation ring, scan workstations, retrieval workstations, management workstations, a network printer, a corporate wide area network, a branch file server, etc. Claim 32 defines a portable electronic journal that is designed to be worn or carried by a user, and defines that the portable journal consists of a voice input device, a text input device, a digital camera, a clock, a communications device, and software that formats journal entries. No such device is shown by Johnson.

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CLAIM 33 (Inventive Step Rejection - Heiman U.S. 6,002,918 and Braun DE 197 12 672)

33. (Amended) A method of turning off a wireless network of devices comprising:

    (a) receiving a turn-off input command from a user using one of the devices;

    (b) sending a turn-off message using the wireless network from said one of the devices to the other devices in the wireless network;

    (c) ceasing the sending of wireless messages between the devices;

    (d) waiting for a turn-on input command from the user using said one of the devices; and

    (e) sending a turn-on message using the wireless network from said one of the devices to the other devices in the wireless network.

REMARKS

Heiman in view of Braun does not show all the features of claim 33. The combination does not, for example, show that a turn-off input command is received from a user and does not show waiting for a turn-on input command from a user. An advantage of this approach is that control is given to the user. In Heiman, the wake up settings appear to be automated settings designed for power savings. Accordingly, the method of claim 33 meets the requirement of inventive step over Heiman and Braun. Applicant has attached an English abstract from the EPO web site which was used in preparing the reply.

WINSTON & STRAWN : Facsimile

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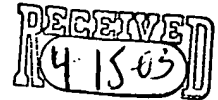
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Total number of pages including this page: *26*

COMMENTS
Re: Examiner Interview on April 18, 2003 PCT Application No. PCT/US02/04947 Applicant Michael D Ellis, Int. Filing Date 2/20/2002 Please find attached draft remarks and amendment for the above-referenced PCT application. The attachment is formatted in a way that should be convenient for discussion purposes. Please let me know if you have any questions.

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